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09/993,374	11/14/2001	Michael S. Jensen	ECO3	5761

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,374

Applicant(s)

JENSEN ET AL.

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed September 26, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed September 26, 2003 have been acknowledged.
2. Examiner acknowledges amended claim 1.
3. The rejection of claims 1, 4 and 7 under 35 U.S.C. 102(b) as being anticipated by Bair, U.S. Patent Number 3,775,916 is withdrawn due to applicant's argument.
4. The rejection of claims 1-3 and 10 under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 is withdrawn due to applicant's argument.
5. The rejection of claims 1 and 4-6 under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 in view of Rizk, U.S. Patent Number 4,620,404 is withdrawn due to applicant's argument.
6. The rejection of claims 1, 4 and 8-9 under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 in view of Siler, U.S. Patent Number 5,826,389 is withdrawn due to applicant's argument.
7. The rejection of claims 1 and 11 under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 in view of Schupack, U.S. Patent Number 4,617,219 is withdrawn due to applicant's argument.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Jasperson, U.S. Patent Number 4,357,384.

Jasperson discloses a composite structure that includes first and second building panels that have a layer of rigid insulation sandwiched between as per instant claim 1 (see abstract, column 1, lines 15-31 and lines 50-55). Additionally, the Jasperson reference discloses an overlying cementitious layer (support) adhered to the insulation as per instant claim 1 (see column 1, lines 25-35). The reference also discloses that the cementitious layer serves to hold the insulation layer against high wind loads (see column 2, lines 53-63). Column 2, lines 49-52 of the reference disclose that the rigid insulation can be blocks of insulation as per instant claim 10. Also, Jasperson discloses that the panels can be formed of cementitious or concrete products as per instant claim 1 (see column 2, lines 5-27). It is disclosed in column 3, lines 54-63 that the structure is designed to have a height as high as several stories. The panels of the Jasperson reference can have a thickness up to no more than 1 inch as per instant claim 2 (see column 6, lines 6-23).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jasperson, U.S. Patent Number 4,357,384.

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Jasperson discloses a composite structure that includes first and second building panels that have a layer of rigid insulation sandwiched between as per instant claim 1 (see abstract, column 1, lines 15-31 and lines 50-55). Additionally, the Jasperson reference discloses an overlying cementitious layer (support) adhered to the insulation as per instant claim 1 (see column 1, lines 25-35). The reference also discloses that the cementitious layer serves to hold the insulation layer against high wind loads (see column 2, lines 53-63). Also, Jasperson discloses that the panels can be formed of cementitious or concrete products as per instant claim 1 (see column 2, lines 5-27). The reference discloses a structural panel that is 7' x 2' as per instant claim 3 (see column 7, lines 29-49). It is disclosed in column 3, lines 54-63 that the structure is designed to have a height as high as several stories. Jasperson does not specifically disclose the width and thickness of the structure. However, the reference does disclose that the composite structure can be used a new roof or wall. The width and thickness of the structure affect the load bearing features on the composite. However, these features are optimizable. Discovery of optimum values of a result effective variable involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have a width greater than 8 feet and a thickness between 3.5 and 5 inches in order to have a roofing or wall structure that is able to sustain heavy loads.

12. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jasperson, U.S. Patent Number 4,357,384 in view of Bair, U.S. Patent Number 3,775,916 and in further view of Rizk, U.S. Patent Number 4,620,404.

Jasperson discloses a composite structure that includes first and second building panels that have a layer of rigid insulation sandwiched between as per instant claim 1 (see abstract, column 1,

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lines 15-31 and lines 50-55). Additionally, the Jasperson reference discloses an overlying cementitious layer (support) adhered to the insulation as per instant claim 1 (see column 1, lines 25-35). The reference also discloses that the cementitious layer serves to hold the insulation layer against high wind loads (see column 2, lines 53-63). Also, Jasperson discloses that the panels can be formed of cementitious or concrete products as per instant claim 1 (see column 2, lines 5-27). The Jasperson reference does not disclose upper and lower border beams for the support frame that is strengthened by a reinforcing bar as per instant claims 4 and 7. Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units with a principally load-bearing of cementitious material and an insulating layer (see abstract). The Bair reference also discloses beams that are along the upper and lower sides of the panel and encompass the insulating layer (see Bair: Figure 4, column 1, lines 51-68 and column 2, lines 55-column 3, line 5). The upper and lower beams receive the panel for mounting. Therefore, it would have been obvious to one of ordinary skill in the art to have upper and lower beams for the support frame in order to allow panel to receive fasteners for mounting (see Bair: column 2, lines 62-68). Figure 4 of the Bair reference discloses a reinforcing bar. The addition of a reinforcing bar affects the strength. Therefore, it would have been obvious to one of ordinary skill in the art to have a reinforcing bar in each border beam in order to strengthen each beam.

Neither Jasperson nor Bair disclose a support with one or more ribs extending the length of the lower and upper border beams as per instant claim 5. Rizk teaches a building panel produced from reinforced concrete and has a support structure (see abstract). Rizk teaches that the support frame serves as the load bearing support element wherein connectors are secured to the frame,

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preferably at the lower and upper portions of the panel as per instant claim 5 (see column 4, lines 5-19). Additionally, Rizk teaches that the connector means are provided by adjacent rib portions that extend along the peripheries of the panel as per instant claim 5 (see column 4, lines 47-68). The ribs provide unitary construction. Therefore, it would have been obvious to one of ordinary skill in the art to have ribs extending between the lower and upper portion of the panel in order to provide a modular construction that is unitary in structure as shown by Rizk in column 4, lines 5-15). None of the references disclose the width of the beams and ribs as per instant claim 6.

Claims 5 and 6 of the Rizk reference teach that the ribs extend along the width of the upper and lower portions of the support frame. The ribs secure the framework of the panel. Therefore, it would have been obvious to one of ordinary skill in the art to have the width of the beams of about 4 inches since the panel is about 4 inches and to have each of the ribs have a width of 2.5 in order to secure the framework.

13. Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jasperson, U.S. Patent Number 4,357,384 in view of Bair, U.S. Patent Number 3,775,916. Jasperson discloses a composite structure that includes first and second building panels that have a layer of rigid insulation sandwiched between as per instant claim 1 (see abstract, column 1, lines 15-31 and lines 50-55). Additionally, the Jasperson reference discloses an overlying cementitious layer (support) adhered to the insulation as per instant claim 1 (see column 1, lines 25-35). The reference also discloses that the cementitious layer serves to hold the insulation layer against high wind loads (see column 2, lines 53-63). Also, Jasperson discloses that the panels can be formed of cementitious or concrete products as per instant claim 1 (see column 2, lines 5-27). The Jasperson reference does not disclose upper and lower border beams for the

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support frame that is strengthened by a reinforcing bar as per instant claims 4 and 7. Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units with a principally load-bearing of cementitious material and an insulating layer (see abstract). The Bair reference also discloses beams that are along the upper and lower sides of the panel and encompass the insulating layer (see Bair: Figure 4, column 1, lines 51-68 and column 2, lines 55-column 3, line 5). The upper and lower beams receive the panel for mounting. Therefore, it would have been obvious to one of ordinary skill in the art to have upper and lower beams for the support frame in order to allow panel to receive fasteners for mounting (see Bair: column 2, lines 62-68). Figure 4 of the Bair reference discloses a reinforcing bar. The addition of a reinforcing bar affects the strength. Therefore, it would have been obvious to one of ordinary skill in the art to have a reinforcing bar in each border beam in order to strengthen each beam.

14. Claims 1, 4 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jasperson, U.S. Patent Number 4,357,384 in view of Bair, U.S. Patent Number 3,775,916 and in further view of Siler, U.S. Patent Number 5,826,389.

Jasperson discloses a composite structure that includes first and second building panels that have a layer of rigid insulation sandwiched between as per instant claim 1 (see abstract, column 1, lines 15-31 and lines 50-55). Additionally, the Jasperson reference discloses an overlying cementitious layer (support) adhered to the insulation as per instant claim 1 (see column 1, lines 25-35). The reference also discloses that the cementitious layer serves to hold the insulation layer against high wind loads (see column 2, lines 53-63). Also, Jasperson discloses that the panels can be formed of cementitious or concrete products as per instant claim 1 (see column 2,

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lines 5-27). The Jasperson reference does not disclose upper and lower border beams for the support frame that is strengthened by a reinforcing bar as per instant claim 4. Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units with a principally load-bearing of cementitious material and an insulating layer (see abstract). The Bair reference also discloses beams that are along the upper and lower sides of the panel and encompass the insulating layer (see Bair: Figure 4, column 1, lines 51-68 and column 2, lines 55-column 3, line 5). The upper and lower beams receive the panel for mounting. Therefore, it would have been obvious to one of ordinary skill in the art to have upper and lower beams for the support frame in order to allow panel to receive fasteners for mounting (see Bair: column 2, lines 62-68). Figure 4 of the Bair reference discloses a reinforcing bar. The addition of a reinforcing bar affects the strength. Therefore, it would have been obvious to one of ordinary skill in the art to have a reinforcing bar in each border beam in order to strengthen each beam.

Neither reference discloses a sill beam extends between the first and second jamb beams in the support frame or a header beam extending between the first and second jamb beams as per instant claim 8. Siler teaches a building structure that includes a panel (see abstract and column 2, lines 56-64). Figure 8 of the Siler reference teaches that header and sill beams can be within the framing members of the structure, which includes two jambs (also see Siler: column 6, lines 42-49). The header and sill beams anchor the support framework. Therefore, it would have been obvious to one of ordinary skill in the art to have the sill beam and a header beam extend between the first and second jamb of the sandwich panel construction in order to position the panel (see Siler: column 6, lines 42-49).

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14. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jasperson, U.S. Patent Number 4,357,384 in view of Schupack, U.S. Patent Number 4,617,219. Jasperson discloses a composite structure that includes first and second building panels that have a layer of rigid insulation sandwiched between as per instant claim 1 (see abstract, column 1, lines 15-31 and lines 50-55). Additionally, the Jasperson reference discloses an overlying cementitious layer (support) adhered to the insulation as per instant claims 1 and 4 (see column 1, lines 25-35). The reference also discloses that the cementitious layer serves to hold the insulation layer against high wind loads (see column 2, lines 53-63). Also, Jasperson discloses that the panels can be formed of cementitious or concrete products as per instant claim 1 (see column 2, lines 5-27). The Jasperson reference does not disclose the cementitious mixture as per instant claim 11. Schupack teaches reinforced cement structures such as panels in the sandwich construction (see abstract and column 1, lines 36-47). The Schupack reference also teaches the composition of the cementitious mixture. Schupack teaches that the composition can include a polypropylene fiber, cement, sand, water and superplasticizer (see column 4, lines 1-5 and Example 2). Schupack does not disclose the amounts instantly claimed. The use of a lightweight, high compression strain capacity cement matrix provides bendability characteristics. Discovery of optimum values of a result effective variable involve only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have a cementitious mixture compositions with 42.3% cement, 42.3% sand, 1% polypropylene fiber, 0.1% superplasticizer and about 14.3% water in order to provide high compression strength (see column 11, lines 29-43 of the Schupack reference).

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone number for the Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISOR OF THE EXAMINER
TELEPHONE NUMBER 1/00

